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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/878,581	06/19/1997	ATSUSHI OHTANI	35.G1975	8324

5514 7590 10/23/2003

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NEW YORK, NY 10112

EXAMINER

VU, NGOC YEN T

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 10/23/2003

RECEIVED

JAN 6 2006

Please find below and/or attached an Office communication concerning this application or proceeding.

OFFICE OF PATENT PUBLICATION
PUBLICATION OFFICE

Office Action Summary

Application No.

08/878,581

Applicant(s)

OHTANI ET AL.

Examiner

Ngoc-Yen T. Vu

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-8,12,14,18-21,25,27,31-34,38 and 94-117 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 5-8, 12, 14, 18-21, 25, 27, 31-34, 38, 94-117 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 29.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114.

Applicant's submission filed on 05/25/2003 has been entered.

Response to Amendment

2. The amendments, filed 05/15/03, have been entered and made of record. Claims 1, 5-8, 12, 14, 18-21, 25, 27, 31-34, 38 and 94-117 are pending.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1, 5, 12, 14, 18, 25, 27, 31, 38, 94-97, 101-105, 109-113 and 117 are rejected under 35 U.S.C. 102(b) as being anticipated by Nagano (US #4,642,679).

Regarding claim 1, Nagano '679 teaches an image sensing apparatus comprising a light source which emits first light (G), second light (R), and third light (B) which are different in wavelength; and a sensing unit (CCD12) which, in response a trigger signal, outputs in a first

Art Unit: 2612

period, a signal of one line of one image illuminated with the emitted light; wherein the first light, the second light, and the third light are sequentially emitted in the first period, and the first light, the second light, and the third light are sequentially emitted in this order in a second period during which no trigger signal is generated over a length of time greater than the length of time of the first period (Fig. 11, col. 7 line 53 – col. 8 line 21; col. 10 line 37 – col. 12 line 10).

Nagano teaches that the green lamp drive signal GFL is turned on and off during the period G1 which is a period prior to the image sensing operation that takes place in the period G2. Nagano shows that the red and blue lights are turning on and off during the period Sd and Sh, respectively, periods when no image sensing operation is performed in order to overcome the initial operating instability, as taught in column 6 lines 38-45. Furthermore the green lamp would also be turned on and off in the same fashion as the red and blue lamps. It is noted that the non-image sensing periods G1, G3, R1 and B1 are longer than the image sensing periods G2, R2 and B2).

As to claim 5, Nagano teaches that said light source sequentially turns on the first light, the second light, and the third light so that said sensing unit may sense an image in a color mode (col. 1 line 6-10).

As to claim 12, Nagano teaches that said first, second and third lights include light with wavelengths corresponding to red, green and blue (col. 3 lines 11-15).

As to claim 94, Nagano teaches that the first light is emitted in a case where light other than the first light is being emitted when the trigger signal is generated in the second period (Fig. 11, R lamp is on during period G3).

As to claim 95, Nagano shows in figure 11 that the first light (G) is light, which is first emitted at the beginning of a sensing operation performed by the sensing unit.

As to claim 96, Nagano shows that the first light is slower in a rising speed when being turned on than the second and third lights (Fig. 11, G is slower in a rising speed than R and B, see Sa, Sd and Sh).

As to claim 97, Nagano teaches that the first light, second, and third light are sequentially emitted whereby the sensing unit senses a color image (col. 1 lines 6-10).

As to claim 101, Nagano teaches that the first light, the second light and the third light are each one of red, green and blue light (col. 3 lines 11-15).

Regarding claims 14, 18, 25, 102-105 and 109, they are method claims corresponding to the apparatus claims 1, 5, 8, 94-97 and 101, respectively. Therefore, claims 14, 18, 25, 102-105 and 109 are analyzed and rejected as previously discussed with respect to claims 1, 5, 8, 94-97 and 101, respectively.

Regarding claims 27, 31, 38, 110-113 and 117, they are method claims corresponding to the apparatus claims 1, 5, 8, 94-97 and 101, respectively. Therefore, claims 14, 18, 25, 102-105 and 109 are analyzed and rejected as previously discussed with respect to claims 1, 5, 8, 94-97 and 101, respectively. It is noted that Nagano teaches a digital controller (127) (see Fig. 1), thus it is inherent that the digital controller (127) includes a control memory in which a program is stored for controlling an image sensing apparatus as claimed.

Claim Rejections - 35 USC § 103

5. Claims 6, 19, 32, 98, 106 and 114 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano '679 in view of Lim et al. (US #5,532,825).

As to claims 6 and 98, Nagano discloses that the light source controlling means sequentially turns on the plurality of light sources (See Figure 11) but the mode of operation is a color mode and not a monochrome mode.

However Lim '825 et al. disclose arranging an image sensing device so as to sense an image in a monochromatic mode (col. 1, lines 15-21) using sequential illumination by a plurality of light sources (col. 4, lines 49-51), the Lim's device clearly being able to process its image data in such a way as to generate both color and monochrome images. It is clear from the teaching in Lim '825 that image data generated in response to sequential color illumination may be processed in such a way as to generate a monochromatic image. Provision of such processing in Nagano clearly would increase its utility by enabling the production of monochrome as well as color images in response to its sequential illumination operation. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to configure the Nagano device so as to sense an image in a monochromatic mode from its sequential illumination operation in order to increase the utility of the device by providing a monochromatic operating mode in addition to the color mode of operation.

As to claims 19, 32, 106 and 114, they are method claims corresponding to the apparatus claims 6 and 98, respectively. Therefore, claims 19, 32, 106 and 114 are analyzed and rejected as previously discussed with respect to claims 6 and 98, respectively.

6. Claims 7-8, 20-21, 33-34, 99-100, 107-108 and 115-116 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagano '679 in view of Iwama (US #5,450, 215).

As to claims 7-8 and 99-100, Nagano teaches that said sensing unit outputs a signal once during the first period (Fig. 11, G2, R2 and B2). However, Nagano fails to teach that said sensing unit outputs a signal a plurality of times during the first period. In the same field of endeavor, Iwama teaches a color reading apparatus comprising a light source section (2), which irradiates R/G/B, light beams in sequence and an electric charge accumulating section (14) (see Fig. 1). For the purpose of providing a color reading apparatus and method which are capable of reading an enhanced color signal without depending on an afterglow characteristic of an image sensing unit, Iwama further teaches that charges accumulated in the electric charge accumulation section are outputs a plurality of times in a same period (col. 6 line 12 – col. 7 line 24). Provision of such processing in Nagano clearly would increase its utility by enabling the production of a sharp color image. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to configure the Nagano device so as to output a signal a plurality of times during the first period in order to increase the utility of the device by providing a sharp color image without depending on afterglow electric charges.

As to claims 20-21, 33-34, 107-108 and 115-116, they are method claims corresponding to the apparatus claims 7-8 and 99-100, respectively. Therefore, claims 20-21, 33-34, 107-108 and 115-116 are analyzed and rejected as previously discussed with respect to claims 7-8 and 99-100, respectively.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen T. Vu whose telephone number is 703-305-4946. The examiner can normally be reached on Mon. – Fri. from 8:30 a.m. to 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy R. Garber can be reached on 703-305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.



NGOC-YEN VU
PRIMARY EXAMINER

Art Unit 2612

NYV
10/17/2003